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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/800,163 | 03/06/2001 | Amit Mital | MS150965.1 | 3604 |

27195 7590 12/29/2004

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EXAMINER

JARRETT, SCOTT L

ART UNIT PAPER NUMBER

3623

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/800,163

Applicant(s)

MITAL ET AL.

Examiner

Scott L. Jarrett

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/13/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 101

1. Claims 1-38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result.

Software, programming, instructions or code not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in a computer. When such descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases.

Furthermore, software, programming, instructions or code not claimed as being computer executable are not statutory because they are not capable of causing functional change in a computer. In contrast, when a claimed computer-readable medium encoded with a computer program defines structural and functional interrelationships between the computer and the program, and the computer is capable of executing the program, allowing the program's functionality to be realized, the program will be statutory.

Regarding Claims 1-38 do not utilize the proper computer program product format and effectively recite descriptive material (software) per se. Claims 1-38 are therefore deemed to be directed to non-statutory subject matter where there is no indication that the proposed software is recorded on computer-readable medium and/or capable of execution by a computer. Examiner suggests that the applicant incorporate into Claims 1-38 language that the proposed software is recorded on computer-readable medium and capable of execution by a computer to overcome this rejection.

Correction required. See MPEP § 2106 [R-2].

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-31, 34-36 and 38-62 are rejected under 35 U.S.C. 102(a) as being anticipated by Microsoft BizTalk Server 2000 Enterprise Edition (herein after referred to as BizTalk Server) as evidenced by the Microsoft BizTalk Server 2000 Documentation Guide (1999-2000).

Regarding Claims 1, 21-23, 39, 52-53, 58-60 and 62 BizTalk Server teaches a workflow management system for modeling, building, scheduling and executing dynamic business processes (Page 0, Paragraphs 1-2). BizTalk Server further teaches that the BizTalk Framework 2.0 builds upon existing standards, tools and systems (Page 0, Paragraph 1; Page 26, Paragraph 1). BizTalk Server further teaches that the workflow management system includes (Pages 1, 17-19, 28-30 and 50):

- an eXtensible Markup Language (XML) based scheduling language (XLANG language and an XLANG scheduler engine (Pages 8, 15, 19 and 46);

- a visual business process modeling sub-system BizTalk Orchestration

Designer (as shown in Figure 1 below; Pages 1-10, 4, 15, 17 and 18);

- a sub-system for creating, editing and managing maps (mapping data sources and records, BizTalk Mapper Pages 15 and 34); and

- a sub-system for creation, editing and managing specifications (BizTalk Editor; Pages 15 and 34);

More specifically BizTalk Server teaches a workflow scheduler graphical user interface system comprising (XLANG Schedule drawing, BizTalk Orchestration Designer; Module 1: Modeling Business Process, Pages 1-10):

- a screen (first region, first area, window, display, etc.) enabling a user to create graphical (visual, iconic, shapes, etc.) representations of a plurality of business processes (workflows, business maps, etc.; Pages 4 and 38);

- a screen (second region, second area, window, display, etc.) enabling a user to bind (link, couple, etc.) the graphical representation of a business process to one of a plurality of components (sub-processes, technical, implementation shapes, etc.; Page 4 and Pages 54-55); and

- and capable of converting (translating, transforming, generating, etc.) the graphical representation of the business process into executable code (XLANG schedule, software, program, script, etc.; Pages 10 and 19).

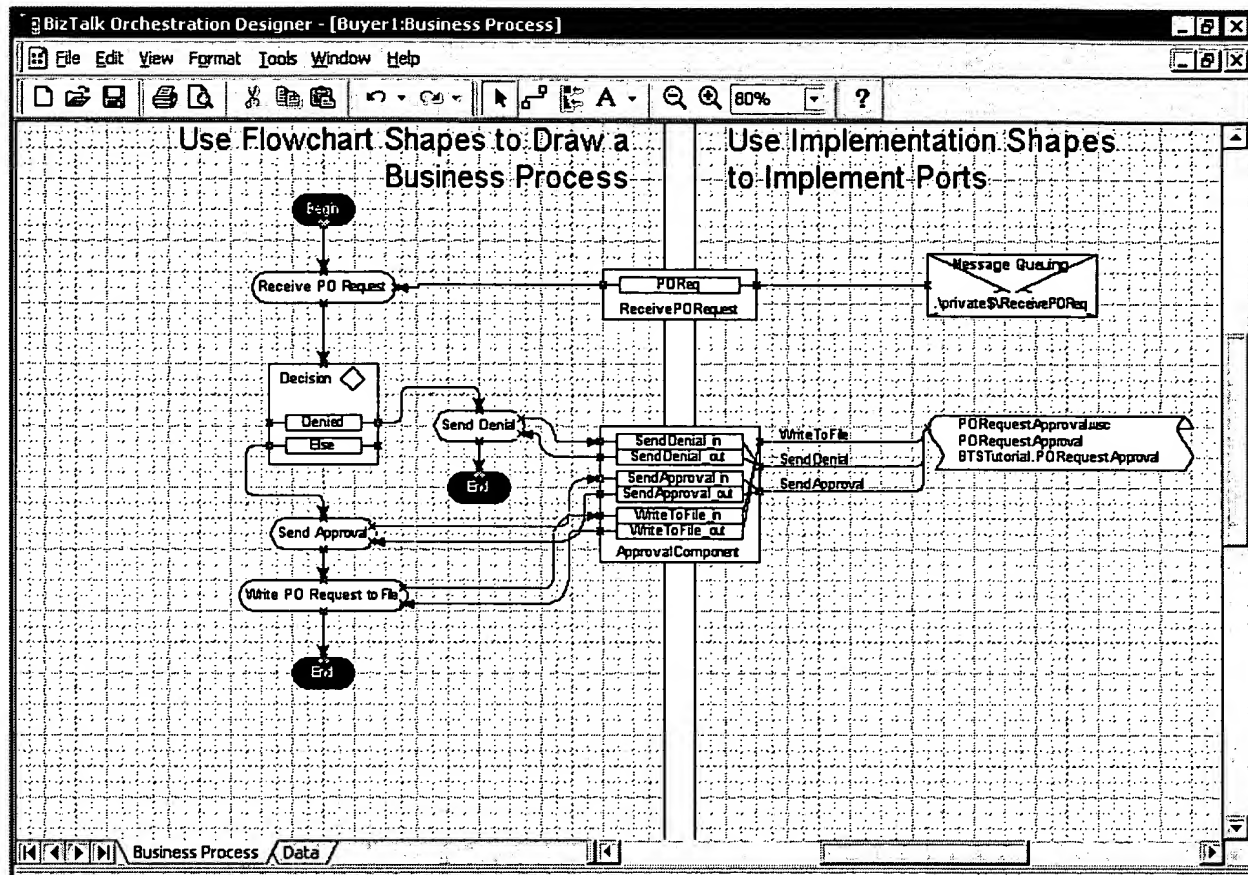


Figure 1: BizTalk Orchestration Designer Screen Shot

Regarding Claims 2 and 40 BizTalk Server teaches a separator bar separating the first screen area from the second screen area (as shown in Figure 1 above; Page 4).

Regarding Claims 3-6, 8, 11, 26-27, 41 and 54 BizTalk Server teaches that the workflow scheduler system further comprises a plurality of workflow components (flowchart and communication shapes, flowchart stencil), that represent the routing logic in an XLANG schedule drawing, enabling the user to create a graphical representation

of a business process. BizTalk Server further teaches that the workflow components can be accessed in a plurality of ways including but not limited to a workflow component menu and that the workflow components include but are not limited to: Abort, Action, Begin, Decision, End, Fork (branching), Join, Transaction (a collection of actions, action grouping), and While (as shown in Figure 2 below; Pages 20-22 and 38).

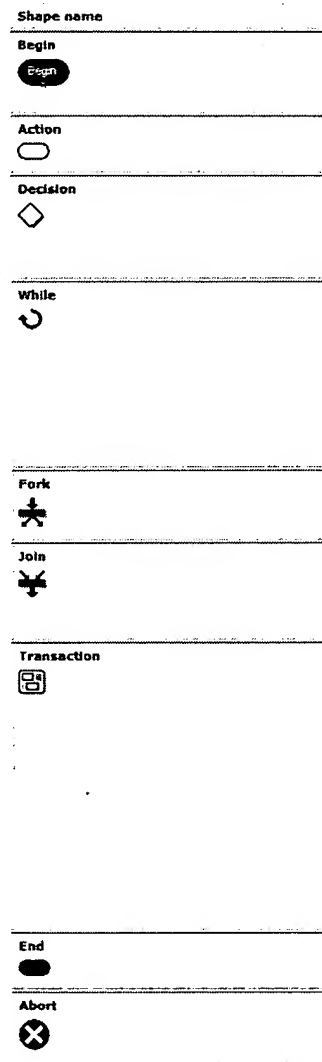


Figure 2: Workflow Shapes

BizTalk Server further teaches that users and components in the workflow management system have roles (Page 48).

Regarding Claims 7, 35 and 43 BizTalk Server teaches an editable transaction component (workflow shape) that enables the user to define transaction properties that are either compensation for transaction (nested transactions), on failure transactions and/or other general error handling (catch/throw) processes (Pages 21, 51-53 and 58-60).

Regarding Claims 9-10, 38 and 44-45 BizTalk Server teaches that the workflow management system includes a plurality of editable components. More specifically BizTalk Server teaches that the decision component is editable enabling the user to add, edit and delete rules to the decision component (Page 2, Steps 5-8; Page 20) and that the user can define the rules added to a decision component (Page 2, Step 7, Page 6, Steps 1-7).

Regarding Claims 12, 14 and 46 and 55 BizTalk Server teaches a binding component menu including a plurality of technological components (implementation shapes, components, etc.), representing the technologies that the XLANG scheduler engine supports, thereby enabling a user to bind (couple, link, etc.) the graphical representation of the business process to a plurality of components.

BizTalk Server further teaches that the implementation shapes include but are not limited to (as shown in Figure 3 below; Page 23; Page 16): messaging, COM, message queuing, and script components.

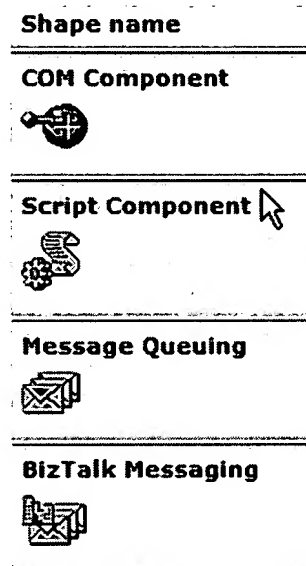


Figure 3: Implementation Components (shapes)

Regarding Claims 13 and 47 BizTalk Server teaches a message editor for a plurality of implementation components (shapes, technological components; Page 5, Steps 1-12, Page 5; Page 23).

Regarding Claims 15, 49 and 56 BizTalk Server teaches that the workflow management system provides at least one implementation port coupling of a plurality of workflow components to a plurality of technological components (Page 3, Steps 1-7; Steps 1-9, Pages 4-5; Pages 24 and 51-53).

Regarding Claims 16-17, 25, 57 and 61 BizTalk Server teaches that the workflow management system includes a data flow screen (area, region, sheet, screen, etc.) representing (displaying, illustrating, etc.) data flow between at least one implementation port and at least one technology component (as shown in Figure 3 above and Figure 4 below; Steps 1-3, Page 7) and that the implementation port can be provided by dragging the technological component into another screen (window, display, etc.).

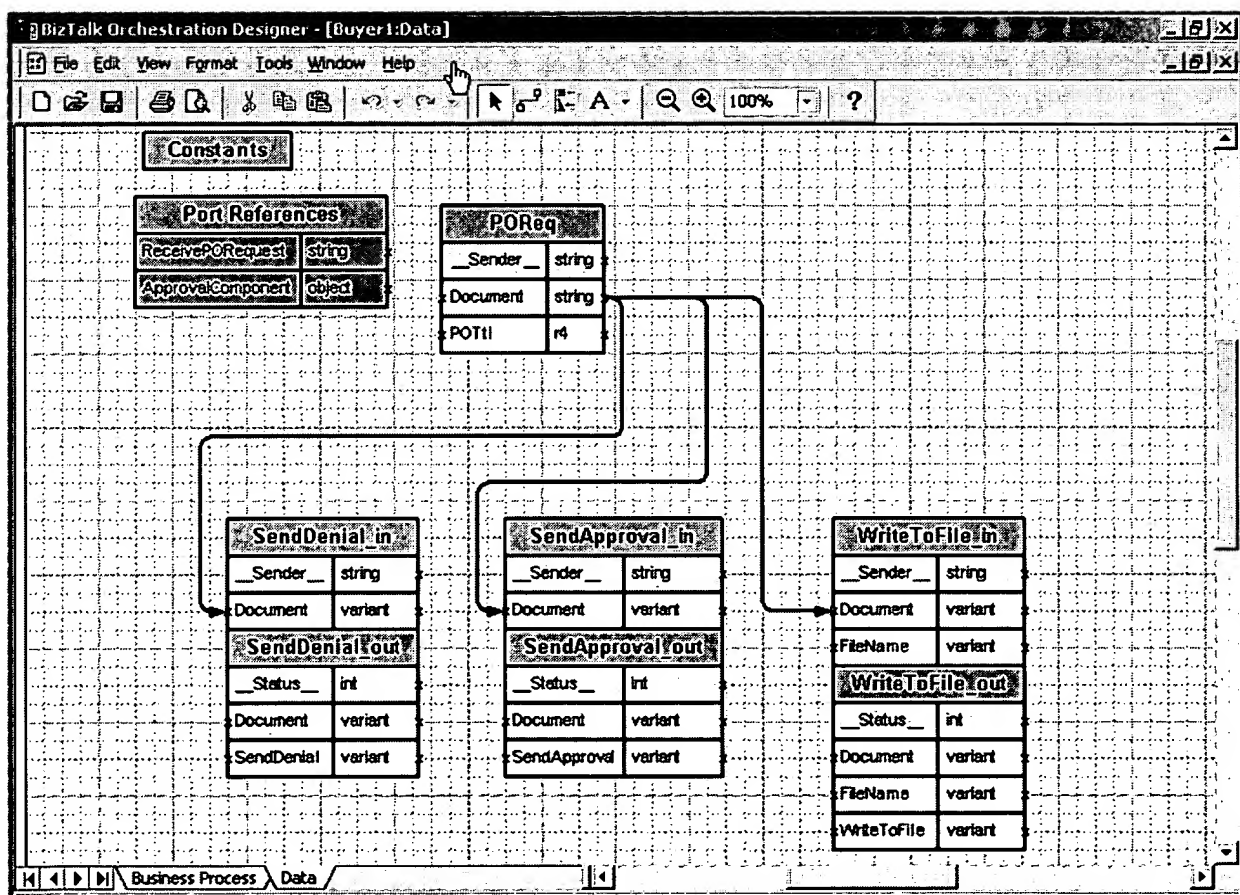


Figure 4: Dataflow Screen Shot

Regarding Claims 18-19, 50 and 51 BizTalk Server teaches that the workflow management system enables users to edit port properties and reference messages including but not limited to the ability to reorder implementation ports and add, delete and edit port messages and arguments (attributes, Pages 3-5; Pages 24-25).

Regarding Claims 20 and 48 BizTalk Server teaches that the system includes a binding wizard (COM binding wizard, Communication binding wizard, etc.) and further that the wizard is invoked by dragging one technological component onto the screen (display, region, area, window, etc; Page 3, Steps 1-7; Page 54).

Regarding Claim 24 BizTalk Server teaches that the system enables the user to enter interfaces and methods for a plurality of implementation components (technological components, COM, Script, etc.; Pages 51-57).

Regarding Claims 28 and 30 BizTalk Server teaches the use of control handles for connecting (linking, binding, etc.) a plurality of shapes to one another and further that the control handles are only available if they are enabled (Page 61).

Regarding Claim 29 BizTalk Server teaches that the workflow management system provides a plurality of tools, standards, properties and the like for management the state of transactions (state management; Pages 54-56).

Regarding Claim 31 BizTalk server teaches the linking (connecting, coupling, binding, etc.) of a plurality components including but not limited to transactions (action grouping, action group, collection of groups) as discussed above. Further BizTalk server teaches the use of ports in linking the plurality of components (Pages 1-10 and 63-64).

Regarding Claim 34 BizTalk Server teaches that transactions (collections/groups of actions, nested actions/transactions) are modeled in the same way as "simple" actions in that the flow of control may flow into the transaction at a single point and flow out of the transaction from a single point (Pages 21, 58 and 63-64).

Regarding Claim 36 BizTalk Server teaches that the transaction component is limited to two nesting levels (Page 58).

Regarding Claim 42 BizTalk Server teaches a drag and drop graphical user interface for selecting a plurality of components (implementation, workflow, technological, communication, etc.), graphically represented as images, icons, shapes, etc., enabling users to build graphical representations of business processes (as shown in Figure 4 above; Pages 1-10).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 32-33 and 37 are rejected under 35 U.S.C. 103(a) as being obvious over Microsoft BizTalk Server 2000 Enterprise Edition (herein after referred to as BizTalk Server) as evidenced by the Microsoft BizTalk Server 2000 Documentation Guide (1999-2000).

Regarding Claims 32 BizTalk Server teaches a graphical workflow scheduler (management) system that enables users to visually model, build, and execute business process. BizTalk Server further teaches that the workflow management system has the ability to group actions into transactions as a means for simplifying the complex tasks and for insure the integrity of a transaction (Pages 21 and 63). BizTalk Server further teaches a plurality of consequences/resultant actions associated with the deletion of components (shapes, Page 62).

BizTalk Server does not expressly teach that actions associated with the deletion of a transaction results in the creation of an implementation port of the deleted action on the component separator bar.

Official notice is taken that that identifying the port associated with the deleted component would provide a reminder to the user that the flow assigned to the port needs to be re-assigned or at the very least re-evaluated to insure the business process has no dangling (unassigned) flows; the placement of an implementation port of the deleted action on the component separator bar being one of obvious design choice.

It would have been obvious to one skilled in the art at the time of the invention that the workflow management system as taught by BizTalk Server would have benefited from providing a means for alerting the user to potential unassigned flows in a business process resulting from the deletion of a plurality of components.

Regarding Claim 33 BizTalk Server teaches that components, including transactions, have associated states.

BizTalk does not expressly teach that a state associated with a transaction port will automatically create a transaction component port on an edge of the transaction component.

Official notice is taken that automatically creating a component port on the edge of a transaction is an obvious design choice thereby providing a convenient means for accessing the port. Accordingly it would have been obvious to one skilled in the art at

the time of the invention that the workflow management system as taught by BizTalk Server would have benefited from automatically creating a component port on the edge of a transaction thereby providing a convenient means for accessing the port.

Regarding Claim 37 BizTalk Server teaches a plurality of editable schedule tool components (workflow, communication, implementation, XLAND scheduler engine, etc.) as discussed above. BizTalk Server further teaches that decision components are editable and provide the ability to add, edit and/or delete rules associated with the decision component.

BizTalk Server does not expressly teach that at least one of the rules for the decision component is non-editable.

Official notice is taken that a decision component must have at least one rule as a precondition for being considered a decision component for without at least one rule there would be no logic (rule) upon which to make a decision. Further making at least one of the rules non-editable is an obvious design choice providing a means for insuring that every decision component has at least one rule. Accordingly it would have been obvious to one skilled in the art at the time of the invention that the workflow management system as taught by BizTalk Server would have benefited from requiring that each decision component have at least one on-editable rule associated with it

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thereby insuring that the decision component contained at least one rule/logic by which to execute its decisions against.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Borg et al., U.S. Patent No. 5,835,898, teach a workflow scheduler system comprising a graphical user interface, graphical elements representing technological components and the linking/binding of elements.

- Berg et al., U.S. Patent 5,999,911, teach a workflow management system wherein the system manages business processes according to a workflow definition. Berg et al. further teach that the workflow management system includes: a graphical user interface for defining the business processes (flow diagram, graphical flow builder, drag and drop), the control/execution of steps (technological components, transaction components, actions, decision, etc.) in the process by the system (flow management engine), error handling (succeed, fail), a properties editor (window, attributes) and the binding of components to steps.

- Flores et al., U.S. Patent no. 6,073,109, teach a workflow management system wherein the system manages linked business processes. Flores et al. further teach that the workflow management system includes: a graphical representation of business processes (business process map, workflow analyst), triggers (bindings, links), event handlers and technological components with defined interfaces.

- Lynn et al., U.S. Patent No. 6,606,740, teach a workflow processing system framework, utilizing existing third-part tools and languages that enables users to develop workflow management system(s). Lynn et al. further teaches a plurality of

workflow management systems from FileNet, IBM, Wang, PegaSystem, Staffware, etc. and the utilization in workflow management systems of a wide array of third-party tools and languages including but not limited to graphical user interfaces and workflow languages.

- Elkin et al., U.S. Patent Publication No. 2001/0044738, teach a workflow management system that provides for the graphical modeling of business processes and results in executable software. Elkin et al. further teach that the workflow management system comprises technical components, actions, decisions, roles, process designs, and a plurality of editors. Elkin et al. further teach that a plurality of graphical systems exist for managing business processes.

- Scheier et al., U.S. Patent Publication No. 2002/0035584, teach the use of BizTalk Server 2000, BizTalk Orchestration and XLANG for managing a workflow.

- Microsoft announces availability of BizTalk Server 2000 beta; Revolutionary new product will orchestrate the next generation of Internet-based business solutions, teaches a workflow management system for developing dynamic business processes. The article further teaches that BizTalk Orchestration sub-system builds upon the Visio diagramming platform to provide a graphical user interface for generating and managing business processes. The article further teaches the use of XLANG as an XML based language for describing business processes.

- Gillmor S. et al., Talking About BizTalk, teach that BizTalk Server (including the BizTalk Orchestration and XLANG sub-systems) provide a system for graphically modeling, controlling and managing business processes. Further Gillmor teach that the

standard version of Visio is used to graphically model business process and bind them to components, applications and business partners and further that BizTalk Orchestration is a finite state machine. Gillmor et al. further teach that there is a plurality of companies that provide process design systems and that there exists a plurality of process modeling standards.

- McKendrick, Joseph, Microsoft Orchestrates Visual View of BizTalk - Product Development, teaches that BizTalk Server (including the BizTalk Orchestration sub-system) manage business processes. Further McKendrick teaches a plurality of visual business process design tools.

- Microsoft Advances BizTalk Vision with Release of BizTalk Jumpstart Toolkit Version 2.0 teaches the availability of the BizTalk Framework and Jumpstart Toolkit that enable businesses to manage business processes. Further the article teaches the launch of the BizTalk Framework initiative in 1999.

- Microsoft debuts BizTalk 2000 Technology; Preview demonstrates comprehensive solution for Internet application integration, teaches that BizTalk Server 2000 is Microsoft's second-generation system for supporting the BizTalk Framework.

- Gordon, Phillip, A piece of the big picture for Microsoft, teaches the acquisition of Visio Corporation by Microsoft as part of its overall market strategy. Gordon further teaches that Visio was an early adopter of Microsoft's OLE and ODBC technologies making Visio more than a modeling tool.

- Mohr, Stephen, Introduction to Microsoft BizTalk Server, teaches that the BizTalk Server 2000 system includes: workflow management (orchestration) and

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scheduling engine, the visual modeling of workflows, the use of XLANG for scheduling and executing workflows and the use of a plurality of editors.

- Mohan, C., Recent Trends in Workflow Management Products, Standards and Research, teaches that workflow management systems are old and very well known in the art. Mohan further teaches that there exists a plurality of workflow management companies, products, systems and standards.

- Shan, Ming-Chien et al., HP Workflow Research: Past, Present and Future, teach Hewlett Packard's ongoing research and product/system development in the area of workflow management. More specifically Shan et al. teach a workflow management system for managing business processes (openPM).

- A Common Object Model Discussion Paper teaches a well-known standard for implementing workflow management components including but not limited to the workflow application interface (WAPI) specification (object bindings, COM, IDL).

- Workflow and Internet: Catalysts for Radical Change teaches the impact of the Internet on the well-known field of workflow management.

- Cole, Barb, Exchange workflow gets help from third parties, teaches that third-party tools build upon Microsoft technologies to provide graphical user interfaces for workflow management systems.

- Radosevich, Lynda, What's happening to workflow?, teaches that a plurality of companies, systems and products exist in the workflow management market and that Microsoft is leveraging existing technologies and products to address the workflow management market.

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- Kiely, Don, Microsoft tackles the workflow beast a graphical user interface workflow scheduler system (Access Workflow Designer).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (703) 306-5679. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (703) 305-9643. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SJ
10/16/2004


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